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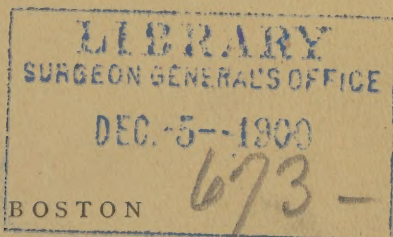
ON RETRODISPLACEMENTS OF THE
PREGNANT UTERUS.

BY

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BOSTON

*Reprinted from the Boston Medical and Surgical Journal of
March 9, 1899*

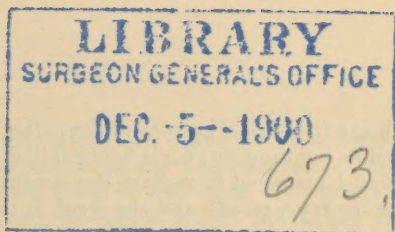


DAMRELL & UPHAM, PUBLISHERS

283 WASHINGTON STREET

1899

S. J. PARKHILL & CO., BOSTON, U.S.A.
PRINTERS



ON RETRODISPLACEMENTS OF THE PREGNANT UTERUS.¹

BY MALCOLM STORER, M.D., BOSTON.

THESE remarks are based upon the following case: Nelly H., age twenty years, single, of thin girlish figure, was referred to me as having an ovarian tumor. Menstruation, previously regular, had been absent for fourteen weeks. The subjective symptoms of pregnancy were denied, and also, as is customary in girls of her class, its possibility. There had been much abdominal pain of late, and her bowels had not moved for several days. Urination was regular and painless, occurring perhaps six times in twenty-four hours. Some weeks previously, however, she had noticed some difficulty in urinating, but as at that time she was under treatment for a supposed gonorrhea (in reality the increased secretion of early pregnancy) the dysuria had been regarded as incidental to her disease. The abdomen was found to contain a smooth tender tumor reaching to the umbilicus, the external genitals were deeply congested, with marked bulging of the perineum, and the uterus was found to be enlarged and completely retroverted; 1,920 cubic centimetres (65 ounces) of clear pale urine was withdrawn by catheter with much difficulty, but all attempts to replace the uterus were unsuccessful, and as the pelvis seemed already overfilled she was not packed but sent

¹ Read before the Boston Society for Medical Improvement, December 19, 1898.

home to bed. The second day, after drawing off 2,110 cubic centimetres, taxis again failed, but on the third day I managed to replace the uterus. A pessary was worn for a month and she went to term in safety. On examining her two years later I found the uterus in good position, and she said that a doctor told her (a few months after the child was born) that the uterus was then in good position, but that upon her becoming pregnant a year later the displacement had returned and that she had had retention again.

While this case is commonplace and typical enough in most respects, it is to be noted that she was unconscious that there was retention, and that there was not the dribbling usually associated with retention, but a fairly regular evacuation of some 250 cubic centimetres at a time. This apparently was a retroversion of a pregnant uterus, and not a case of pregnancy in a retroverted uterus, a distinction which I think should be made when possible, for the latter offers a much better prognosis—if left to nature—than does the former, as in an accidental retroversion the force that drives the enlarged fundus past the promontory of the sacrum probably will be much greater than any force that nature can exert to replace it. A slight degree of backward displacement generally causes little trouble. Many of the more extreme displacements also correct themselves as pregnancy advances, generally during the fourth month, just as an ovarian tumor, normally prolapsed at first, swings up out of the pelvis as soon as with increase in size the force which impels it to expand in the line of least resistance becomes sufficient to overcome the force which holds it down. In a certain number of cases, however, spontaneous cure does not take place. In 24,000 gynecological cases Martin saw 121 incarcerations.

Spontaneous cure will be limited by four factors—

adhesions, the sacral angle, the character of the displacement, and the degree of the displacement. Adhesions will not always soften up; it is evident that the more pronounced the sacral angle, the harder it will be for the fundus to get past the promontory; while as regards the character of the displacement, it has been argued ingeniously by Chrobak that it makes a great difference whether we are dealing with a version or a flexion. In flexions the cervix finds in the pubes, against which it is pressed, a point of leverage when uterine contractions take place. Furthermore, in flexions the uterus is most on the stretch at its upper convex surface, and accordingly the most vigorous contractions will take place there, the effect of which is that the fundus is being continually pulled up out of the sacral hollow, while at the same time contractions lessen the antero-posterior diameter of the flexed uterus, thereby giving it more room to swing up in, none of which things occur in a version. From this Chrobak reasons that unadherent flexions may be left to themselves, while all versions should be corrected at once. While the correctness of his theory must depend in doubtful cases on the angle of the cervix to the pubes, in versions of the third degree, at all events, in which the cervix may point almost directly upwards at the pelvic brim, it can obtain no point of leverage against the pubes, and incarceration must take place. Fortunately pregnancy is rare in such extreme displacements, as it also tends to be in densely adherent uteri, in which the inflammatory process which causes the adhesions often closes the tubes.

Generally there are no symptoms of consequence until about the tenth week, and they may be still further delayed if the woman has a large pelvis. Here again the character of the displacement is of some moment, as Dührssen has pointed out. The long diameter of a

retroflexed uterus is not as great as that of a retroverted one, and accordingly with a retroversion of the second degree pressure will be felt about half a month sooner than with a flexion. In a retroversion of the third degree, on the other hand, where the uterus stands on its head, as it were, there is nothing to prevent development upwards, and accordingly symptoms will be delayed two and one-half months longer than in retroversions of the second degree. Until pressure symptoms come on the patient is often unaware that any trouble exists. I have twice happened to come across a pregnant retroversion when consulted for sterility. While urinary disturbances are apt to be the first thing noticed, the more or less severe interference with micturition that generally precedes actual retention often is regarded as merely an exaggeration of the usual discomfort of pregnancy, and this error is by no means always confined to the laity. The result is that many cases—in out-patients at least—are not seen until retention has taken place. I have been struck by the number of cases in which there was no movement of the bowels for a week or more before retention took place, and the question arises whether the overloading of the sigmoid may not be a cause of the acute urinary disturbance. It certainly would tend to increase the normal dextro-torsion of the pregnant uterus, thereby displacing and compressing the urethra. This constipation, while sometimes reflex, is generally the direct result of pressure, but the greater the flexure of the uterus the less is the pressure upon the intestine; while as regards the bladder, it would seem that the greater the flexure of the uterus the greater would be the drag upon the urethra, but as a matter of fact I think the bladder is more disturbed by the upward pressure of the cervix in versions than by any drag in flexions.

Upon examining a case of incarceration an exaggerated discoloration of the vulva is apt to be seen, and the bulging of the perineum in the case reported is often extreme. In Mayor's case a violent effort caused a central rupture of the perineum and protrusion of the fundus. In most flexions the cervix is accessible and generally there is little of the softening usually associated with pregnancy, probably from interference with the blood supply. Sometimes uterine growth being hampered in other directions, there is enormous hypertrophy of the cervix. In many versions, and in some flexions, the cervix disappears out of reach behind the pubes, a condition I have always found peculiarly bewildering to the student. In still other cases the cervix is so flattened that the careless finger does not recognize it.

If retention be present the abdomen will be found to contain a smooth fixed tumor, more pyriform than an ovarian tumor, and generally too large for an uterus of the corresponding month of pregnancy. Its tenderness may suggest a twisted ovarian cyst. There should be, of course, no uterine souffle, but Croom had a case in which one could be obtained, and in which the catheter produced no urine. At the autopsy the souffle was explained by the bladder being found full of clots. While a catheter will generally settle the question, sometimes one cannot be passed; sometimes when inserted its whole length the bladder cannot be reached; and sometimes, when all the urine that can be has been drawn off, the tumor persists, either from hypertrophy or rigidity of the bladder walls (Albers), or from sacculation of the bladder (Cullingworth, Lathuraz), or from blood clots in the bladder (Croom), and in such cases the diagnosis is naturally very difficult. Even with the bladder empty, the fundus has been confused with a variety of conditions, for example,

with prolapsed ovarian tumors or fibroids of the posterior wall. I have seen this mistake twice. The most difficult thing to exclude is an extra-uterine pregnancy, in which, by the way, retention is not unknown (Barbour). Pozzi says that irregular hemorrhages point to extra-uterine pregnancy, while intermittent contractions in the pelvic mass indicate it to be uterine. I remember seeing, however, an incarceration at the third month, with a slight loss of blood every few days, which stopped as soon as I replaced the uterus, while, on the other hand, intermittent contractions in the walls of extra-uterine pregnancies are sometimes seen, though very rare. A lateroflexion of the pregnant uterus (retroflexion with torsion) may be especially difficult to tell from an hematocele. In this dilemma Dührssen advises the passage of a sound, maintaining that with care no harmful results should follow. Leaving out the great danger of abortion, no matter how much care is used — and it must not be forgotten that a miscarriage coming on even weeks later may be due to the sound — its use does not seem to me to give any certainty. If, as is often the case, there is hypertrophy of the cervix, if the point of the sound be arrested at the angle of flexion, there is no way that I know of recognizing that fact. At least five competent observers report cases in which they made the wrong diagnosis through trusting to the sound.

Given an incarcerated uterus, if the displacement be not corrected by nature or art, various results may follow. Sometimes pregnancy goes on to full term, the uterus becoming sacculated; much more frequently abortion takes place, probably from interference with the blood supply. In fact, nature is so apt to cut the Gordian knot in this way that many cases of habitual non-syphilitic abortion must be due to this cause. These retroflexed uteri have naturally much difficulty

in expelling their contents. Challeix has reported three cases of extreme flexion in which the fetus was retained eight, five and one month respectively after its death. If abortion does not take place grave results generally are not long delayed. Gottschalk has collected 67 deaths from this cause, and I have found 10 more,² making a total of 77. Of these 13 were from rupture of the bladder, 18 from uremia, and most of the rest from sepsis, its origin being practically always in the bladder.

The first step in treatment is to empty the bladder. The patient should try to relieve herself in various positions, including the knee-chest, should there be any difficulty about passing a catheter. Should the meatus be drawn up out of reach pressure upon the abdomen or the fundus may expel enough urine to relieve the distention sufficiently to allow voluntary micturition, or at any rate to render the meatus accessible. Sometimes pressing the cervix backwards will have the same fortunate result. If these means are unsuccessful the meatus may perhaps be reached by putting the patient in the lithotomy position with the pelvis raised and the thighs strongly flexed, which position also straightens the urethra. If necessary we may adopt Cohnstein's suggestion, the "climbing process" (*Kletterverfahren*), as Sanger aptly calls it, which consists in bringing the cervix into reach by drawing down the anterior vaginal wall by one tenaculum after another, each gaining a little on the last, until finally the cervix can be grasped with bullet forceps and drawn down and back from the pubes, by which time the meatus is very likely already in sight. I prefer a four-toothed rake to a tenaculum for this purpose. If one form of catheter will not

² Albers, Burns, Braun, Elliot, Gooch, Henske, Oliver, Ross, Wilmer.

pass a variety of others should be tried. I have usually been able to pass a soft-rubber one, but twice I have been forced to use a stiff male instrument, against my will, for one cannot be certain of the direction of the canal, though generally in retention it is parallel to the symphysis. I remember, however, a woman whose bladder was carried backwards to such a degree that I could enter it only by giving an S-twist to a stiff male catheter, reversed, with a sharp downward curve. The value of repeated attempts is shown by a case of Croom whom two experts failed to catheterize, but from whose bladder a probationer nurse immediately afterwards drew 3,500 cubic centimetres. When the flow of urine stops it should be seen whether more cannot be obtained after a change in position. The cervix may divide the bladder so that part of it is quite inaccessible to a catheter. In Lathuraz-Viollet's case the posterior prolongation of the bladder presented at the vulva behind the fundus, making it out of the question to empty the bladder with the patient on her back. Sometimes the catheter cannot be passed; indeed one writer was so unfortunate as to have three such cases. We have Spiegelberg's authority to make, under such circumstances, cautious attempts to replace the uterus even though the bladder be full, but I should hesitate very much to use the slightest force, preferring to first empty the bladder by aspiration. Five fatal cases are on record as following attempted taxis with the bladder full. This is especially true in cases in which there is the slightest reason to suspect impairment of the vitality of the bladder wall. With more or less advanced gangrene of the bladder even puncture is not to be lightly undertaken. Dührssen goes so far as to say that given a case not easily catheterized, in which the dribbling urine shows gangrene of the bladder, an abortion should at once be

induced by aspiration through the posterior wall of the fundus, if necessary, without attempting to empty the bladder even by puncture.

Since the famous case in which Marion Sims used the bent handle of an iron spoon many instruments have been devised with the idea of improving upon the leverage that the vaginal finger can exert, but they have little to recommend them. Most of the manipulative methods are based upon the principle of depressing the cervix, either by traction from below or by shoving it down from above with the fingers close behind the pubes (Cohnstein), while at the same time the fundus is elevated, causing the uterus to revolve upon itself rather than attempting to force it up bodily. A rhythmical rocking motion has been advised, which perhaps lessens the long diameter of the mass by stimulating uterine contractions, but, on the other hand, probably increases the risk of abortion. Other methods than taxis will sometimes succeed in rebellious cases. Elastic pressure in the form of water-bags in the rectum or vagina has sometimes been of service. Mueller, in a recent article, strongly recommends the elastic balloon. Some men still advise a soft bulb pessary as a means of exerting pressure. A much more promising use of the pessary is found in the ingenious treatment of Laroyenne (Levrat), which is based upon the theory that the chief factor in maintaining the displacement is suction. The extended fingers are insinuated, palm upwards, between the fundus and the sacrum, as high as the promontory, with as little pressure as possible upon the uterus. This enucleates the fundus, and it is claimed that it will now generally fly up of itself, but if it does not a malleable pessary with a large posterior arm is introduced, so moulded as not to press against the uterus but merely to fill the space made by the fingers. It

is claimed that reduction will then almost always take place in a day or two.

In a recent communication Funke speaks of a case in which a three months' pregnant retroflexion was easily reduced by means of the shot-bag treatment as suggested by Freund. This means of exerting gradual pressure consists of introducing into the vagina, by means of a speculum, a strong condom, which is then filled with shot (about a kilogramme of No. 3), which adapts itself to the curves of the pelvis, and with the patient in the dorsal position exerts a very decided but not especially painful pressure, which can be continued indefinitely if necessary. The following method has served me in several cases. The patient's bladder and rectum having been emptied she is put in the knee-chest position upon a low table. The operator then stands at her left hip, and with one or two fingers of his right hand introduced into the rectum or vagina endeavors to press the fundus down and away from him so that it will swing past the promontory to the right of the median line, which is the direction of least resistance, the left pelvis being more or less occluded by the rectum, as is the median line by the promontory. At the same time the operator's left arm thrown over the patient's right hip holds her firmly in position against him, and allows him to gauge exactly how much force he is using with his other hand. With the patient in the knee-chest position the right hand is much better adapted to swinging the uterus through the right pelvis than is the left. An assistant meanwhile draws the cervix down or stretches it with a double hook. The advantages of an anesthetic must be weighed against the loss of the patient's sensations as a guard upon the amount of force used, and also the inconvenience of the knee-chest position when the patient is anesthetized.

Should taxis fail, the treatment to be pursued depends upon the patient's condition. If there be no urgent symptoms, an expectant policy is indicated, certainly up to the end of the fourth month. The patient should be put to bed, with its foot elevated to favor the abatement of any edema of the soft parts. Catheterization should be regular and anodynes given if necessary. Meanwhile the patient should use the knee-chest position several times daily, allowing the vagina to balloon out with air each time, and repeated attempts at taxis should be made. Should the uterus be held back by adhesions I am convinced that careful packing does no harm; that if abortion occurs it is in spite of the packing. I have thus corrected in safety at least three displacements that were resistant to taxis. If by packing the central point of the fundus can be brought past the angle of the sacrum the further care of the case generally can be left to nature. After replacement a pessary should be worn well into the fifth month. The patient should be kept thoroughly under opiates for a few days after a difficult replacement, for it is often the immediate cause of abortion. Carrying this cautious expectant treatment too far is, however, to be deprecated. I remember unpleasantly well the tortures I allowed a woman to suffer some years ago whom I packed and packed, whose uterus I tried to replace almost daily for a month or more, being then filled with the idea that with patience any uterus could be replaced. Fortunately for us both she aborted before any permanent harm was done. I feel confident that with radical treatment she could have been carried to term. There is little chance of being able to replace a uterus after four and one-half months, and the child is almost certain to be lost. In such cases, and in others in which taxis should be recognized as being hopeless or danger-

ous when first seen, I do not think that practically leaving the case to nature is by any means all that is indicated. When the patient is already in a critical condition prompt relief is of course demanded, and the usual induced abortion may be the safest thing that can be done, but I feel that it is indicated only when the patient is so far reduced by sepsis or exhaustion as to give little promise of standing a more serious operation, it being presumed, of course, that the child is still alive; but under these conditions it has not always been possible to induce an abortion even by such vigorous means as the aspiration of the liquor amnii, and of course under such circumstances any operation, no matter how grave, would be justifiable if it promised to save the woman's life. I question very much, however, whether we ought not to go still further and recognize that the rights of the child demand some consideration, supposing it to be still alive and the woman in good condition. We know the comparative ease with which even a large tumor can be dislodged from the pelvis when the abdomen is opened, when previously it was apparently immovably impacted, and the pregnant uterus lends itself especially well to this from the fact that the cervix affords a fulcrum by which to rotate the uterus upon itself from above, while an assistant's hand in the vagina raises the fundus. Should there be no impaction, but the uterus be held back by adhesions, dividing them under the aid of the eye is a far safer procedure than forcibly rupturing them. Operative interference adds practically nothing to the mother's danger, and if successful is not apt to interrupt pregnancy; in fact, is not nearly as apt to do so as a forcible replacement by taxis, while, if it is not found possible to replace the uterus by the abdominal route, the fact that a laparotomy has been done does

not render a subsequent abortion any more difficult or dangerous, nor, if it is necessary to resort to such heroic measures, would a preliminary celiotomy prevent a vaginal Cesarean section or Porro. Dührssen advises against laparotomy if there are any evidences of gangrene of the bladder, thinking that the bladder is almost certain to be ruptured in digging down through the intestines, which, he says, are almost surely adherent if the bladder is gangrenous. This does not seem to me quite as imminent a danger as he would have us believe. The intestines are not of necessity adherent, even with the bladder wall in a very bad condition, nor does careful separation of adherent intestines involve a rupture of the bladder by any means. Dührssen also holds that the presence of colon bacilli in urine that suggests gangrene is presumptive evidence of adherent intestines. Surely colon bacilli can gain entrance to the bladder in other ways than direct immigration from the intestine. Accordingly, even in advanced cases, notwithstanding evidences of positive disease of the bladder wall, I should urge a laparotomy even if it should turn out to be merely an exploration, while in less severe cases after four months should taxis fail, and earlier should there be warnings of undue pressure, I think an attempt should be made to correct the displacement by laparotomy, and naturally the earlier the operation the better the prognosis for both mother and child. The few men who have been bold enough to operate under these conditions have met with gratifying success for the most part. In 1894 Gottschalk operated upon a woman in extremis to relieve pressure upon the intestine caused by an adherent retroversion, the woman dying. In 1894, also, Schwartz corrected by celiotomy a three-months' gravid retroflexion, operating under the supposition that the mass was a tumor. In 1895, Mitchie,

operating for pyosalpinx, found in addition a four-months' gravid retroversion. The tube was removed and the uterus replaced without interfering with pregnancy. In the same year Fry operated upon a case successfully, doing at the same time ventro-suspension. In 1895 Cameron at the end of the eighteenth week opened the abdomen, emptied the bladder by incision (having failed to do so with a catheter), and replaced the uterus manually with ease. Jacobs says that he has operated eleven times, with success in ten. M. D. Mann has reported two successful cases this year. Thus of 18 cases, in 16 pregnancy was not disturbed, in one abortion followed, and in one, death, the woman being moribund when operated upon. This is certainly a sufficiently favorable showing to warrant interference in proper cases, as sixteen children were saved that otherwise probably would have been sacrificed.

Symphiseotomy was the operation advised in desperate cases by the older accoucheurs, and Davis speaks of Cruikshank as having performed the operation for this indication, but I have not been able to find a case since its aseptic revival. It is interesting that Hunter, in the beginning of his career, in 1756, when he was the first in England to describe the condition, should have had his attention attracted to it by autopsies in which he was able to disengage the impacted uterus only after separating the pubic bones.

REFERENCES.

- Albers. *Medical News*, April 30, 1892.
 Barbour. *Edinburgh Medical Journal*, September, 1894.
 Braun. In Hirst, *American System of Obstetrics*.
 Cameron. *British Medical Journal*, 1896, ii, 1277.
 Challeix. *Jour. de Med. de Bordeaux*, 1896, 102.
 Chrobak. *Centralbl. f. Gyn.*, 1892, 113.
 Cohnstein. *Archiv für Gyn.*, 1888, 156.
 Croom. *Edinburgh Medical Journal*, 1890, ii, 905.
 Cullingworth. *Clinical Journal*, 1895, 337.

- Davis. Ed. 1836, p. 865.
 Dührssen. Centralbl. f. Gyn., 1898, 859.
 Elliot. Obstetrical Clinic, 100.
 Fry. Medical Record, June 4, 1898.
 Gooch. Compendium, 116.
 Gottschalk. Archiv für Gyn., 1894, 380.
 Henske. St. Louis Clinic, 1890, 151, and 1894, 377.
 Jacobs. Jour. d'Accouchement, April 16, 1898.
 Lathuraz-Viollet. Ann. de Gyn. et d'Obst., 1896, 286.
 Levrat. Arch. de Toc. et de Gyn., October, 1893.
 Mann. American Journal of Obstetrics, July, 1898.
 Mitchie. British Gynecological Journal, August, 1898.
 Oliver. Lancet, 1890, i, 638.
 Perfect, Ross and Wilmer in Burns's Midwifery.
 Schwartz. Ann. de Gyn., October, 1894.
 Funke. Hegars Beiträge, 1898, 277.

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PUBLISHED BY DAMRELL & UPHAM,
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